

CLAIMS

1. A fiber material having improved malodor scavenging properties, the material comprising:
 - (a) fibers; and
 - (b) dispersed in the fibers, an effective malodor scavenging amount of particles of zinc or similar reacting metal or metal alloy, or a cyclodextrin material; wherein the cyclodextrin is free of an inclusion complex compound and the cyclodextrin comprises an α -cyclodextrin, a β -cyclodextrin, a γ -cyclodextrin or mixtures thereof, having pendant moieties or substituents that render the cyclodextrin compatible with the fiber material or a combination of said particles and said cyclodextrin material.
2. The material of claim 1, wherein the particles of zinc or similar reacting metal or metal alloy are nanosized particles.
3. The material of claim 1, wherein the particles of zinc or similar reacting metal or metal alloy are nanosized particles having an average diameter in the range of 10 to 500 nm.
4. The material of claim 1, wherein the particles of zinc or similar reacting metal or metal alloy are nanosized particles having an average diameter in the range of 40 to 250 nm.

5. The material of claim 1,
wherein the particles of zinc or similar reacting metal or metal alloy are nanosized particles having an average diameter in the range of 60 to 150 nm.
6. The material of claim 1,
wherein the particles are zinc particles being essentially free of zinc oxides.
7. The material of claim 1,
wherein the amount of particles of zinc or similar reacting metal or metal alloy in the fiber material is in the range from about 0.015 to 1 wt-% or from about 0.015 to 0.20 wt-%, based on the fiber material.
8. The material of claim 1,
wherein the fiber material is a thermoplastic material.
9. The material of claim 8,
wherein the thermoplastic material is selected from the group consisting of polyolefines, polyester, polyamides, ethylene-vinylalcohol-copolymers, ethylene vinyl acetate copolymers, polystyrene, polystyrene copolymers, polyvinyl chloride, polyvinylidene chloride, (vinyl chloride-co-vinyl acetate) copolymers, polyether ketones and mixtures thereof.
10. The material of claims 8,
wherein the thermoplastic material is a polypropylene.
11. The material of claim 1,

wherein the amount of cyclodextrin material in the fiber material is in the range from about 0.01 to 5 wt-% or from about 0.1 to 1 wt-%, based on the fiber material.

12. The material of claim 1,
wherein the cyclodextrin material has at least a low moisture content of about 1 wt.-%, based on the cyclodextrin material.

13. The material of claim 1,
wherein the cyclodextrin material comprises at least one substituent selected from the group consisting of a silyl ether group, an alkyl ether group and an alkyl ester group.

14. The material of claim 13,
wherein the substituents having the alkyl ester group comprise at least one moiety selected from the group consisting of acetyl moieties, propyl moieties, butyl moieties and maleated polyethylene having a $-(CH_2)_n$ -chain wherein $n = 8$ to 15,000.

15. The material of claim 13,
wherein the substituents having the alkyl ether group comprise at least one moiety selected from the group consisting of methyl moieties, ethyl moieties and propyl moieties.

16. The material of claim 13,
wherein the substituents having the silyl ether group comprise at least one moiety selected from the group consisting of methyl moieties, ethyl moieties, propyl moieties and butyl moieties.

17. The material of claim 1,

wherein the material has fibers selected from the group consisting of meltblown fibers, spunbonded fibers, electrospun fibers and combinations thereof.

18. The material of claim 1, wherein the particles of zinc or similar reacting metal or metal alloy and/or the cyclodextrin material are uniformly dispersed in the fibers.

19. The material of claim 1, wherein the fiber material comprises cellulosic fibers.

20. A method for manufacturing a material according to claim 1, the method comprising the following steps:

- a) physically mixing the particles of zinc or similar reacting metal or metal alloy and/or the cyclodextrin material into the material to be manufactured into fibers.
- b) producing fibers from the material obtained in step a).

21. Method of claim 20, wherein the particles of zinc or similar reacting metal or metal alloy to be added to the fiber material are dispersed in a mineral oil.

22. Hygienic article comprising a fiber material according to claim 1.

23. Hygienic article according to claim 22, wherein the article is a disposable diaper.

24. Hygienic article according to claim 23, wherein at least one of the facing layer and the absorbent layer of the disposable diaper comprises the fiber material having improved malodor scavenging properties.